

Environmental
Restoration
Contractor

ERC Team Meeting Minutes

0049953

Job No. 22192
Written Response Required? NO
Close CCN: N/A
OU: 200-ZP-2
TSD: N/A
ERA: CCM
Subject Code: 4170; 4170

SUBJECT 200-ZP-1 and 200-ZP-2 Status

TO Distribution

FROM V. J. Rohay *VJR 12/23/96*

DATE December 20, 1996

ATTENDEES

V. J. Rohay H9-11
J. R. Freeman-Pollard H9-12
M. A. Buckmaster H0-19
G. R. Chiaramonte H9-12
A. C. Tortoso H0-12
D. A. Faulk B5-01

DISTRIBUTION

Attendees

Document and Info Services H0-09

RECEIVED**DEC 27 1996****DOE-RL/DCC**

A meeting on the above subject was held on December 12, 1996, at Sigma II, Husky Room. The agenda is included as Attachment 1.

200-ZP-2 Rebound Study

The 200-ZP-2 rebound study began as planned on November 4, 1996 when the soil vapor extraction systems were turned off. V. J. Rohay provided summary tables of the carbon tetrachloride baseline and rebound data as of 12/9/96 (Attachment 2). During the first five weeks of the rebound study, carbon tetrachloride concentrations have remained less than 1 ppmv at monitoring points between the ground surface and approximately 45 ft depth. The highest carbon tetrachloride concentrations have been observed at wells and monitoring probes between approximately 90 and 130 ft below ground surface, near the Plio-Pleistocene fine-grained soils and "caliche layer." Carbon tetrachloride vapor concentrations near the water table, between 185 and 210 ft below ground surface, have not exceeded 20 ppmv.

Three subsurface monitoring probes in the 216-Z-9 area did not produce sufficient flow to allow vapor samples to be collected. These probes were deleted from the monitoring program on November 12, and three new monitoring probes were added. The new probes were selected at depths between 25 and 65 ft below ground surface to monitor for potential migration of carbon tetrachloride from the Plio-Pleistocene layer toward the ground surface.

At the last rebound study status meeting (11/13/96), the meeting participants agreed that wells and monitoring probes would be sampled every other day through 11/22/96, after which the data would be reviewed for adjustments to the sampling frequency. Based on the results from the first three weeks, the sampling frequency was changed to weekly on November 25. Weekly carbon tetrachloride monitoring will continue through December. During January and February 1997, the sampling frequency at most wells and soil gas probes will be monthly. However, those wells with widely fluctuating carbon tetrachloride concentrations will be monitored twice per month.

D. A. Faulk (EPA) provided information on the 200-ZP-2 rebound study test plan and preliminary data to the Hanford Advisory Board (HAB) Environmental Restoration committee during the last week in November. He reported that the HAB committee was supportive of the study.

A. C. Tortoso (DOE) revised the Class III Change Control Form, which adds a TPA milestone (M-15-36) to restart the vapor extraction systems no later than 4/30/97, to include the correct authorizing signatures from DOE and EPA. The revised form is expected to be signed by 12/16/96.

200-ZP-1

M. A. Buckmaster provided an update on the 200-ZP-1 pump-and-treat remediation (Attachment 3). To date, the 200-ZP-1 Treatment System has removed 179.1 kg of carbon tetrachloride. Flows of the three extraction wells average between 28 and 78 gallons per minute; and current (12/4/96) influent concentrations (Tank T-01) average 3200 ppb. Also, M. A. Buckmaster informed EPA and DOE that condensation on the leak detection cables is preventing the treatment system from operating 24 hours per day. Currently, Field Services is working the problem and expects 24 hour per day operations to resume next month. In addition, the treatment system would be shut down during the Christmas holiday.

Future Status Meetings

The next status meeting on the 200-ZP-1 and 200-ZP-2 projects will be held on January 9, 1997.

**AGENDA
200-ZP-1 and 200-ZP-2 STATUS
DECEMBER 12, 1996**

200-ZP-2 Rebound Study

- Review of Rebound Study Data
- Changes in Sampling Location
- Changes in Sampling Frequency
- Hanford Advisory Board Briefing

200-ZP-1 Pump-and-Treat Remediation

Carbon Tetrachloride Data Table for 11/4/96 - 12/9/96						
		1	2	3	4	5
		Depth	Maximum	Minimum	Maximum	Minimum
			Rebound	Rebound	Baseline	Baseline
		(feet)	(ppmv)	(ppmv)	(ppmv)	(ppmv)
Zone 1		0 to 5	0	0	0	0
Zone 2						
	Z-9 "core"	25 to 86	60	0	29	0
	"perimeter"	40 to 87	171	19	350	18
	Z-1A/18/12 "core"	68 to 80	22	0	4.5	0
	"perimeter"	30 to 91	5	0	0	0
Zone 3	Z-9	91 to 115	268	17	72	16
	Z-1A/18/12	100 to 132	354	0	21	0
Zone 4	Z-9	118 to 130	128	0	42	2
	Z-1A/18/12	145	94	10	N/A	N/A
Zone 5	Z-9	155	31	15	N/A	N/A
	Z-1A/18/12	No samples				
Zone 6	Z-9	185-189	19	5	14	10
	Z-1A/18/12	203-210	20	11	0	0
Explanation of columns:						
Column 1	Depths of sampling points in each zone.					
Column 2	Maximum rebound CCl4 concentration observed in each zone during first five weeks.					
Column 3	Minimum rebound CCl4 concentration observed in each zone during first five weeks.					
Column 4	Maximum CCl4 concentration observed in each zone during baseline survey.					
Column 5	Minimum CCl4 concentration observed in each zone during baseline survey.					

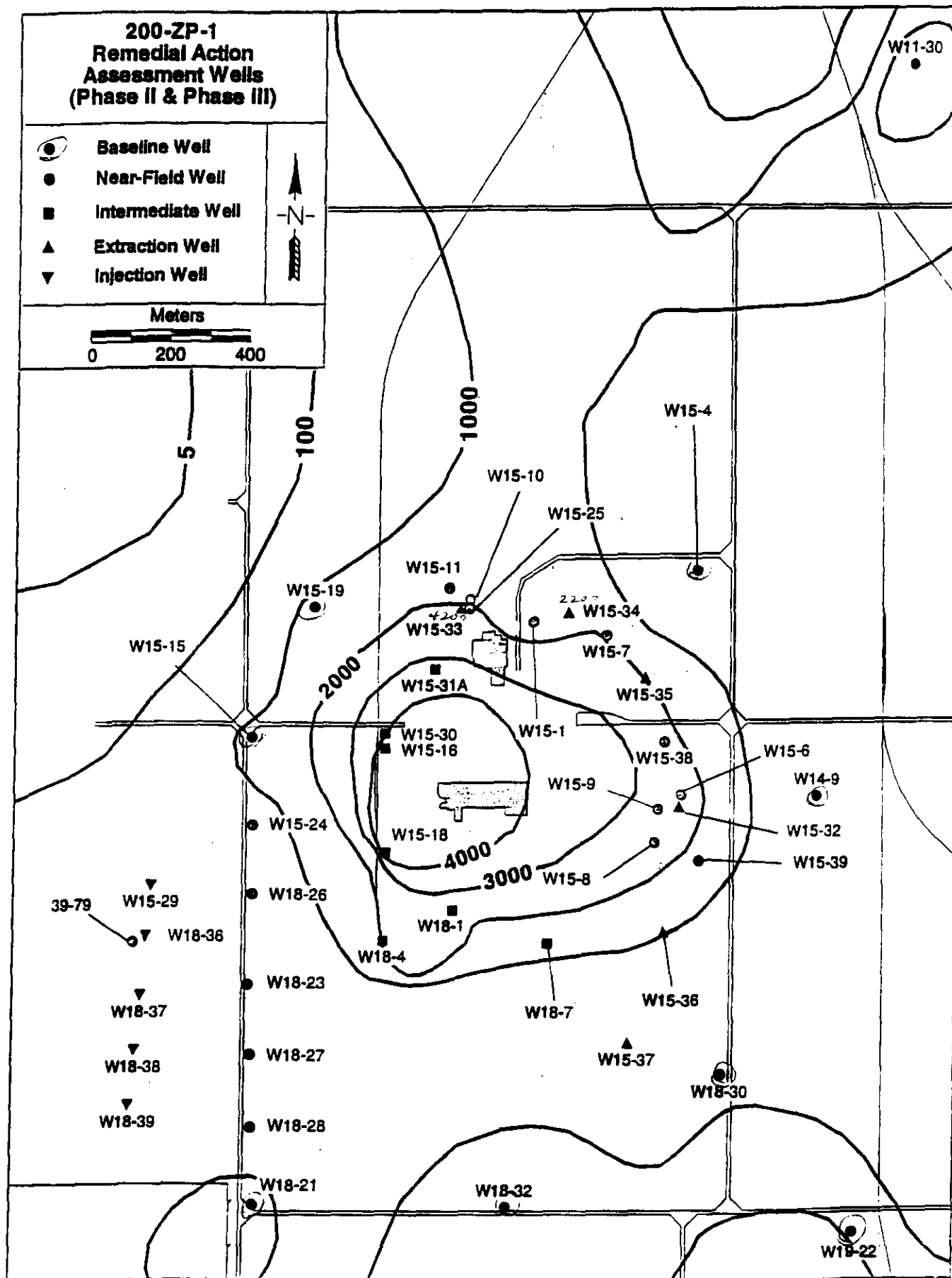
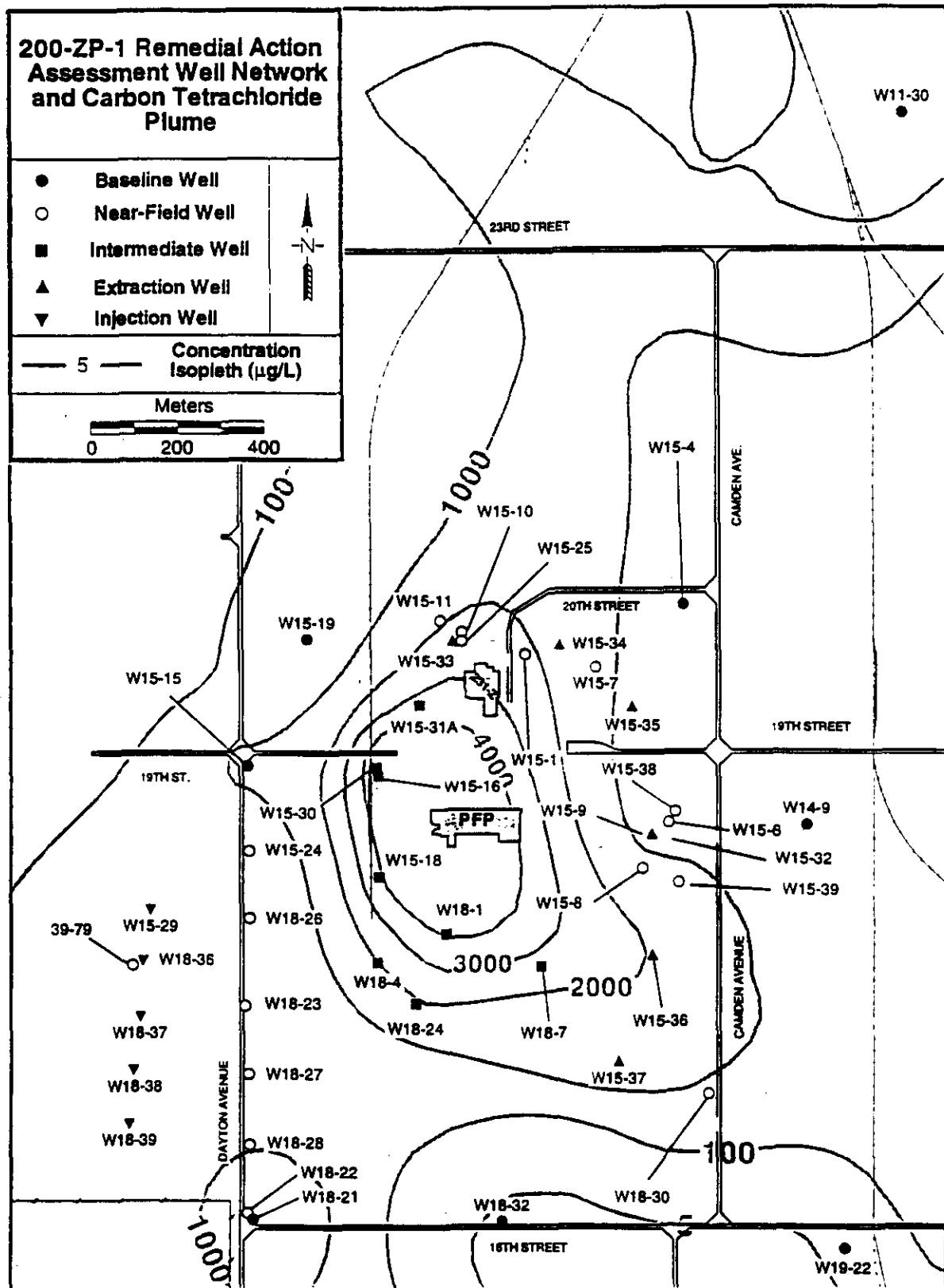


Figure 3-5. 200-ZP-1 Remedial Action Assessment Network
and Carbon Tetrachloride Plume



200-ZP-1 OPERABLE UNIT

•Treatment system operations are summarized below:

Operational Period	Run Time (hours)	System Availability (%)	Volume (L)	Ave. CCl ₄ Conc (ppb)	Mass CCl ₄ Removal (kg)
11/27/96 - 12/04/96	24	36.9	808,839	3200	2.7
8/5/96 - To Date	2254	76.1	70,231,152	N/A	179.1



200-ZP-1 WEEKLY OPERATION SUMMARY

System Runtime (hrs)	Avg. Flow (gpm)	Avg. Flow (gpm)	Avg. Flow (gpm)	Weekly Process (gals)	Avg. RH (%)	Avg. Airflow (scfm)	Avg Air Temp (F)	CCI ₄ Removed kg/ (lbs)	Sys. Avail Week Total (%)	Sys. Avail Oct.TD Total (%)	Sys. Avail YTD Total (%)	CCI ₄ YTD Total kg/ (lbs)	Groundwater Treated YTD Total (gals)
24	<u>WE01</u> 28.4	<u>WE02</u> 41.9	<u>WE03</u> 78.1	213,696	*	573	68.8	2.7/ (6)	36.9	78.5	76.1	179.1/ (394)	18,555,126

* RH probe is inoperable at this time.



200-ZP-1
WEEKLY SAMPLING SUMMARY

Sample Date	WE01 W15-33 Conc. (ppb)	WE02 W15-34 Conc. (ppb)	WE03 W15-35 Conc. (ppb)	T-01 Ext Tank Conc. (ppb)	V-01 Stripper Conc. (ppb)	T-02 Inj. Tank Conc. (ppb)	H-01 Inf. Vapor Conc. (ppm)	A-3 Eff. Vapor Conc. (ppm)
12-4-96	4200 CCl ₄ 21 TCM 7.8 TCE	2200 CCl ₄ 11 TCM 8.3 TCE	3100 CCl ₄ 14 TCM 2.9 TCE	3200 CCl ₄ 15 TCM 5.7 TCE	<2 CCl ₄ <2 TCM <2 TCE	<2 CCl ₄ <2 TCM <2 TCE	13	<1

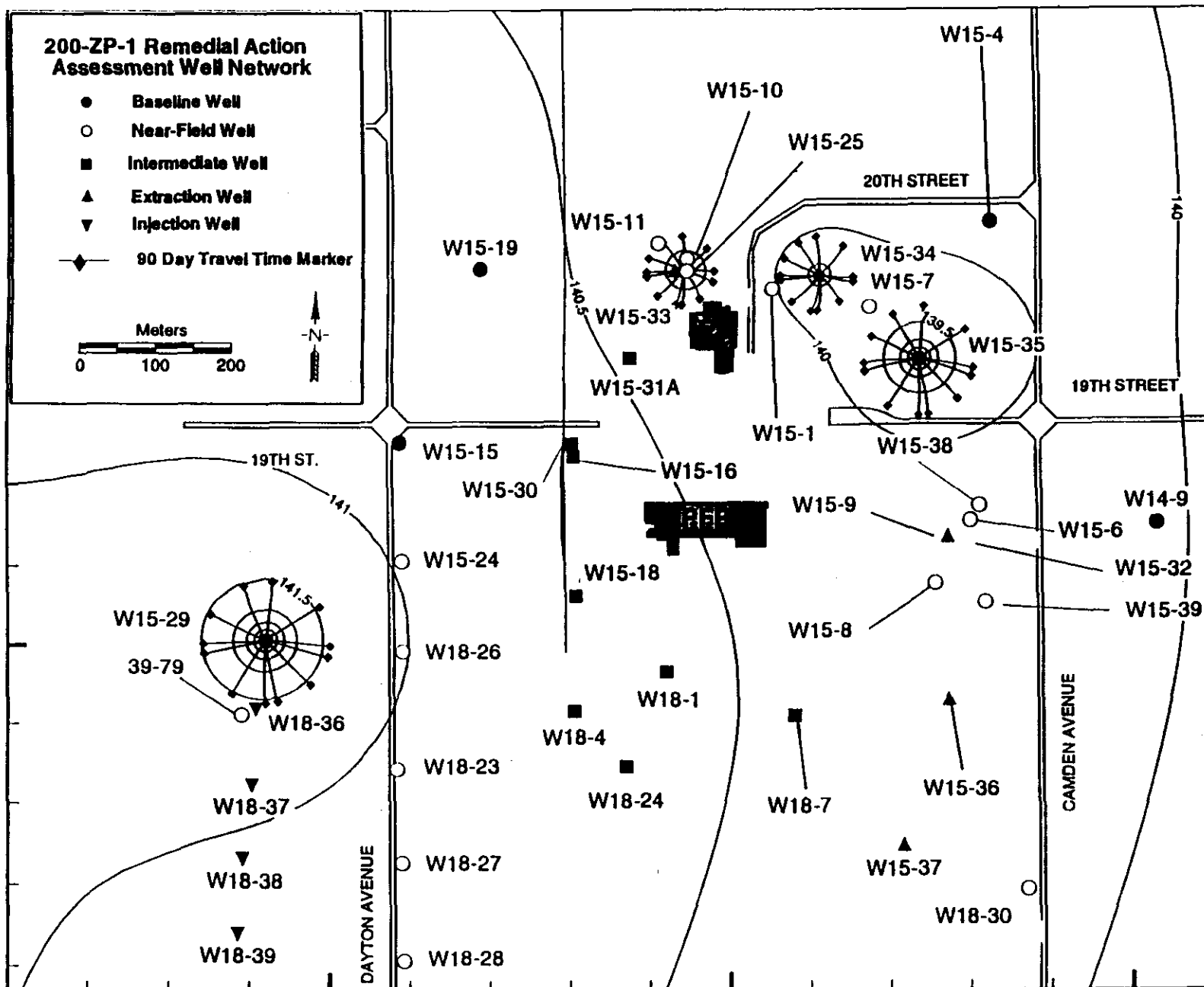


Figure 3-19. Ninety-Day Capture Zone.

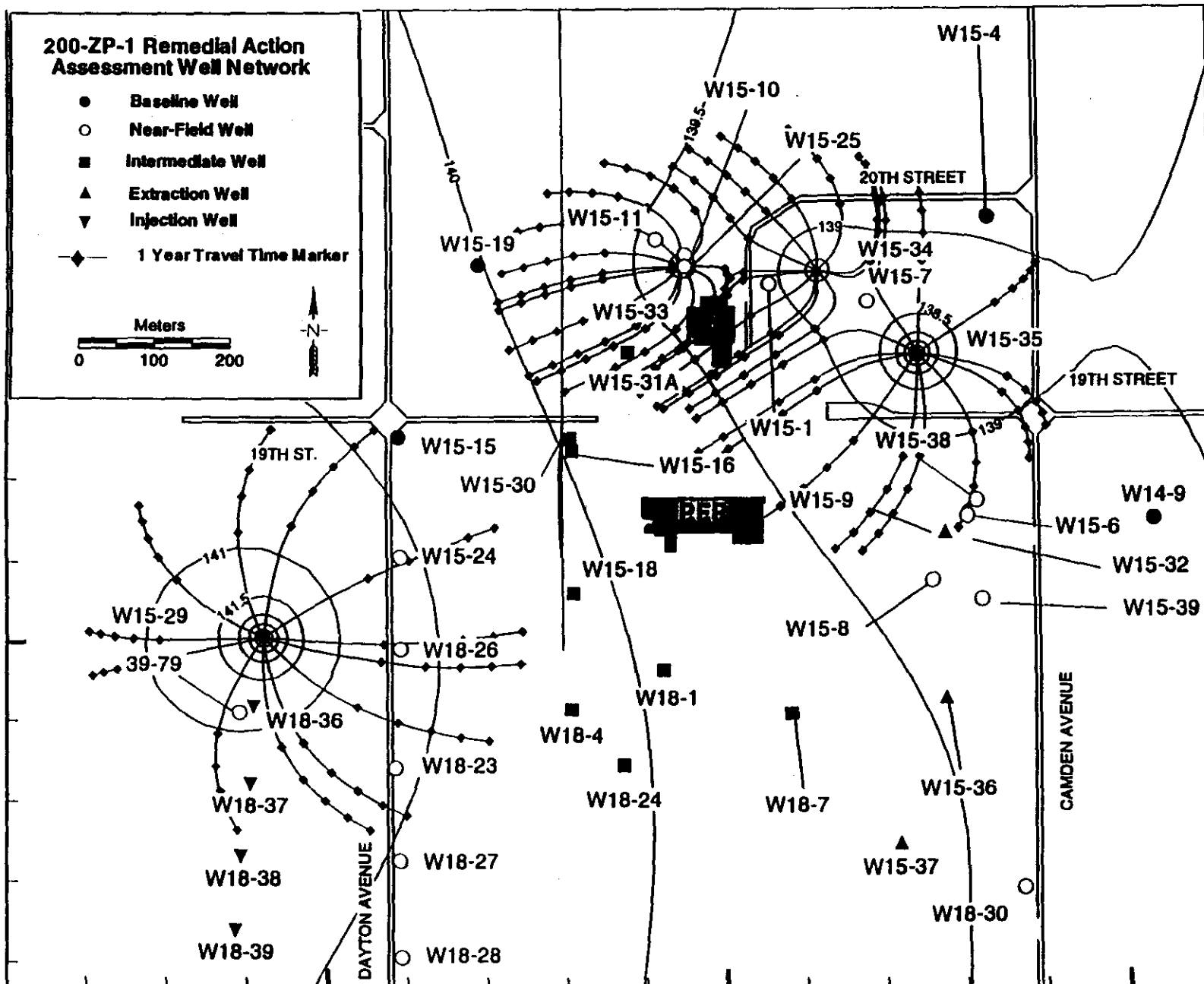


Figure 3-20. Five-Year Capture Zone.